

Figure 1

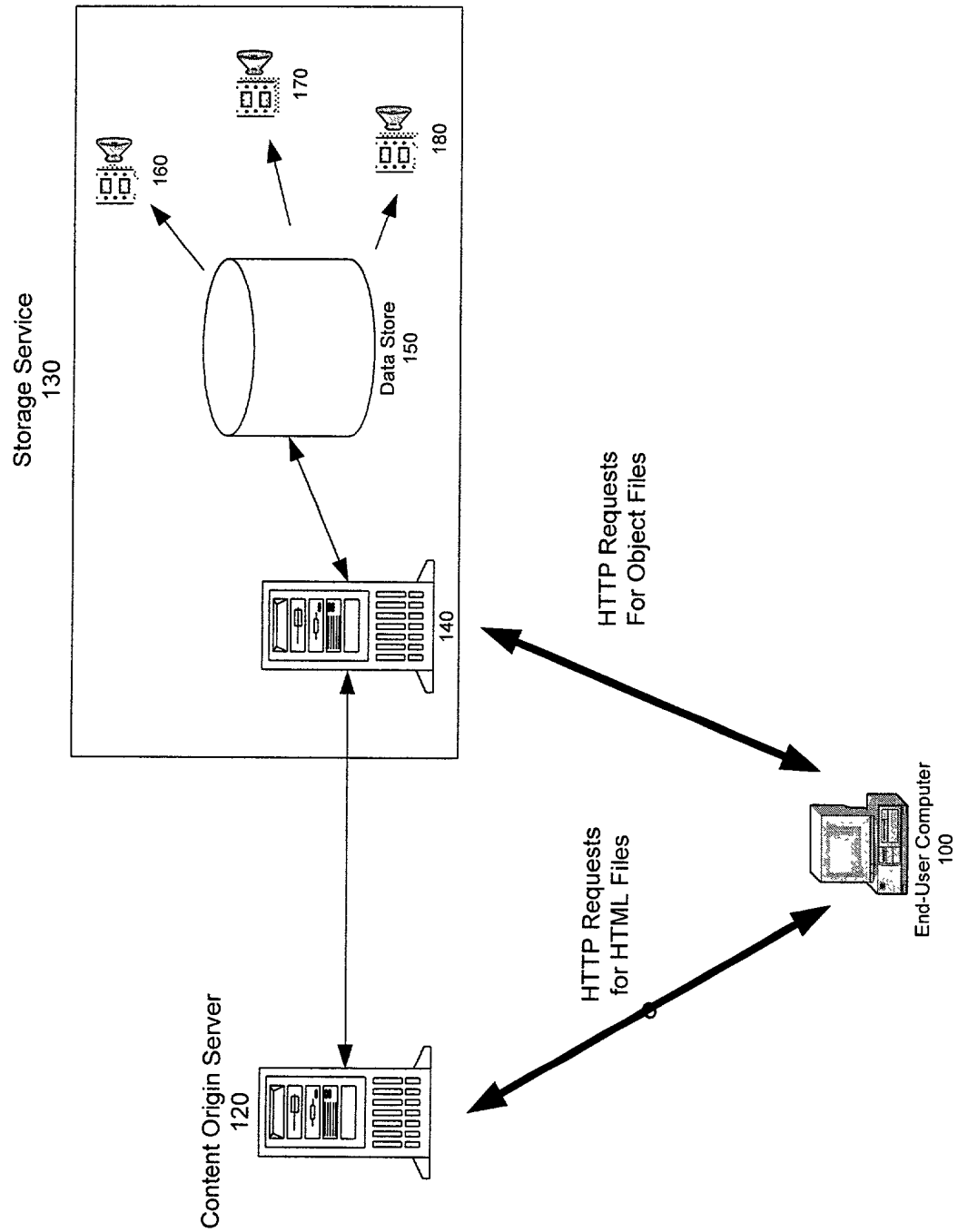


Figure 2

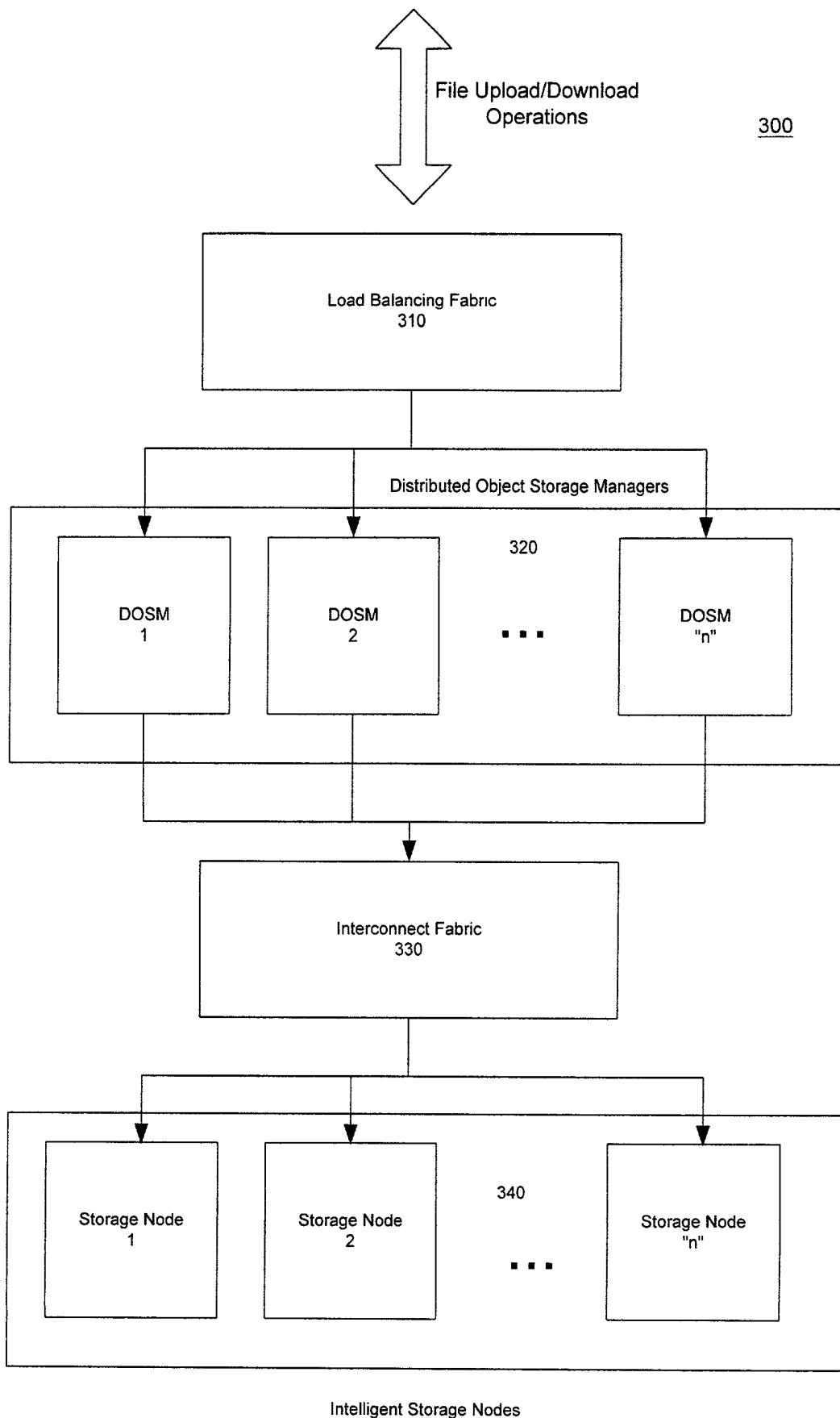


Figure 3

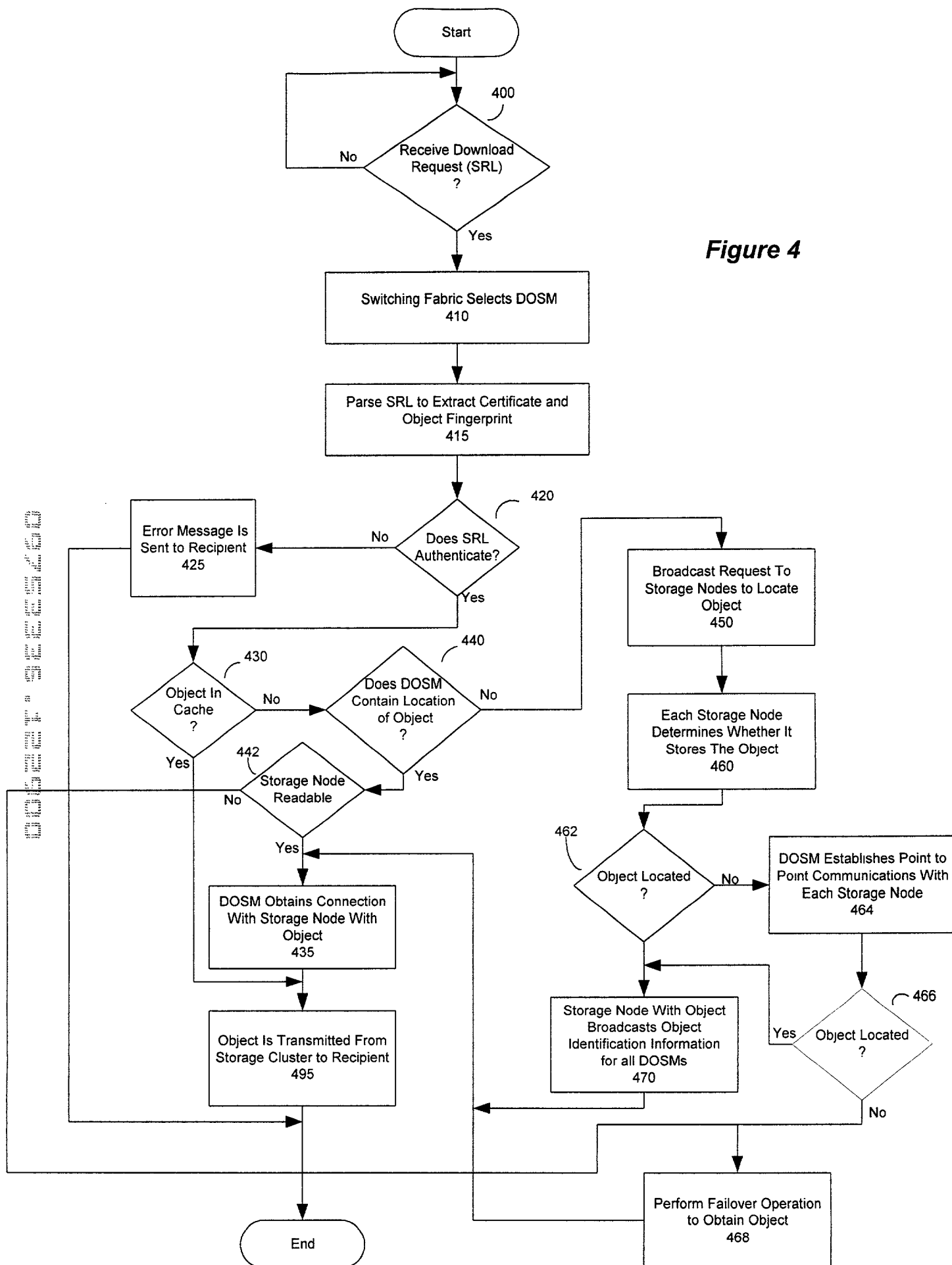


Figure 4

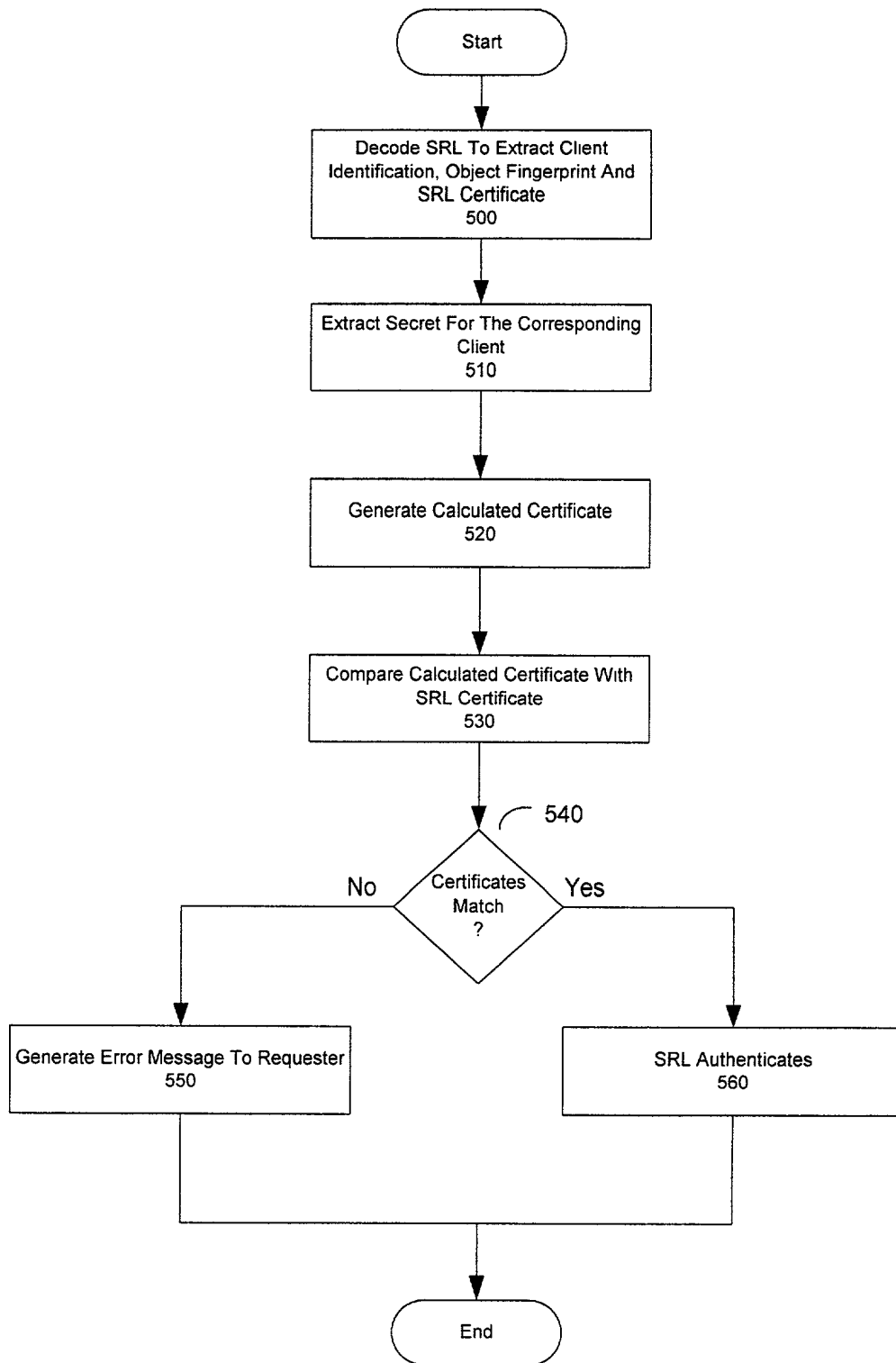


Figure 5

US 2010/0144451 A1
May 13, 2010
100

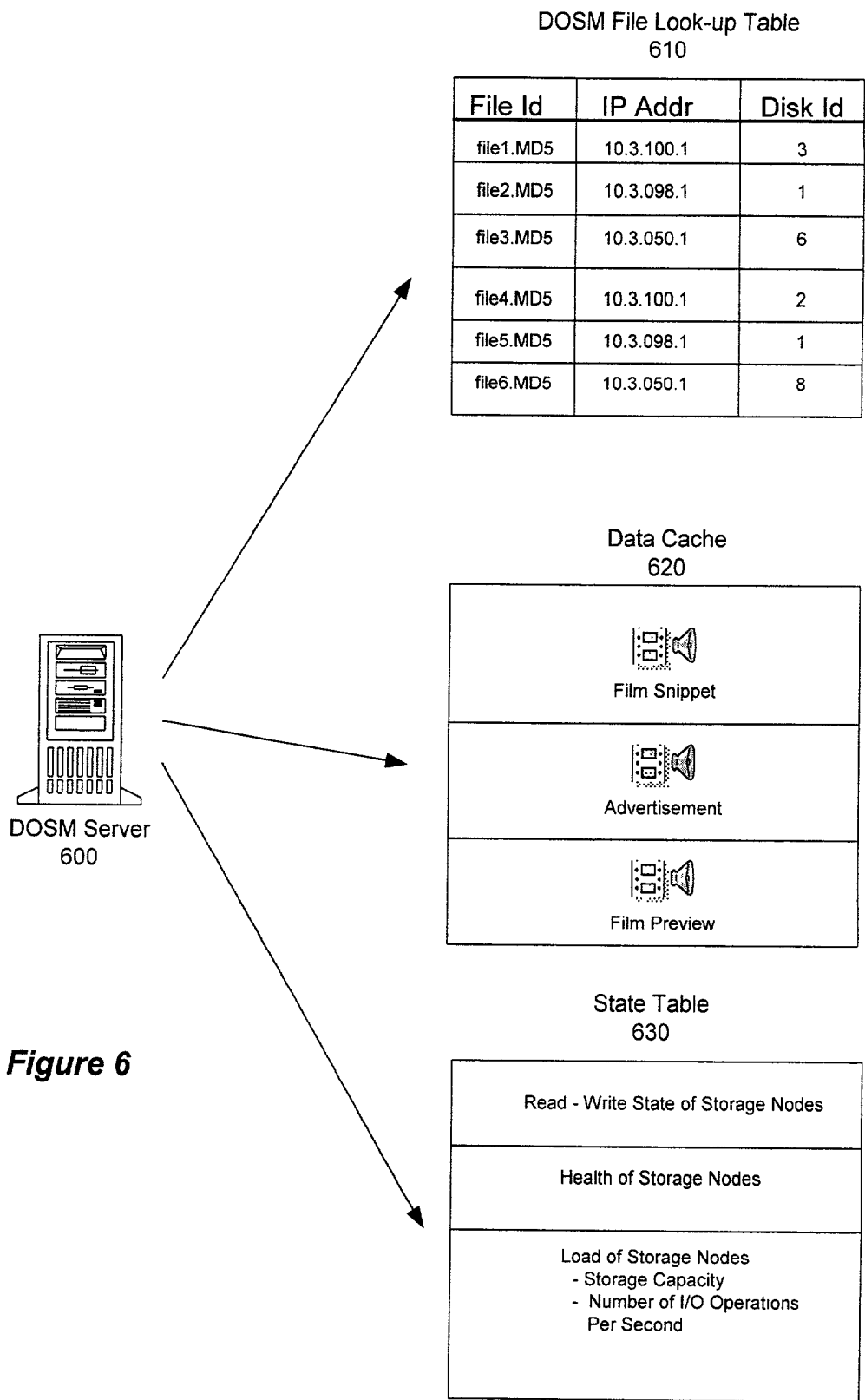


Figure 6

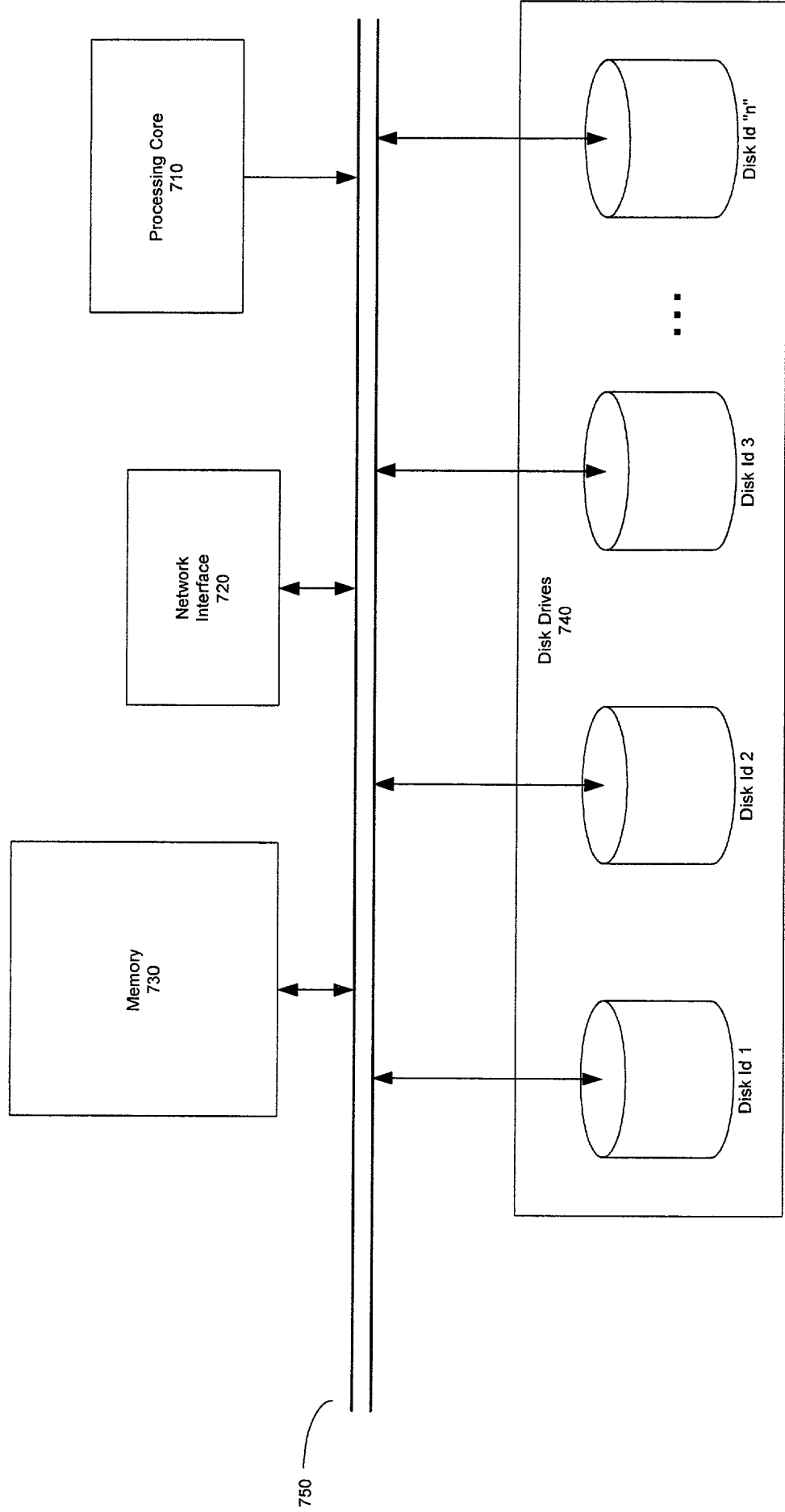


Figure 7

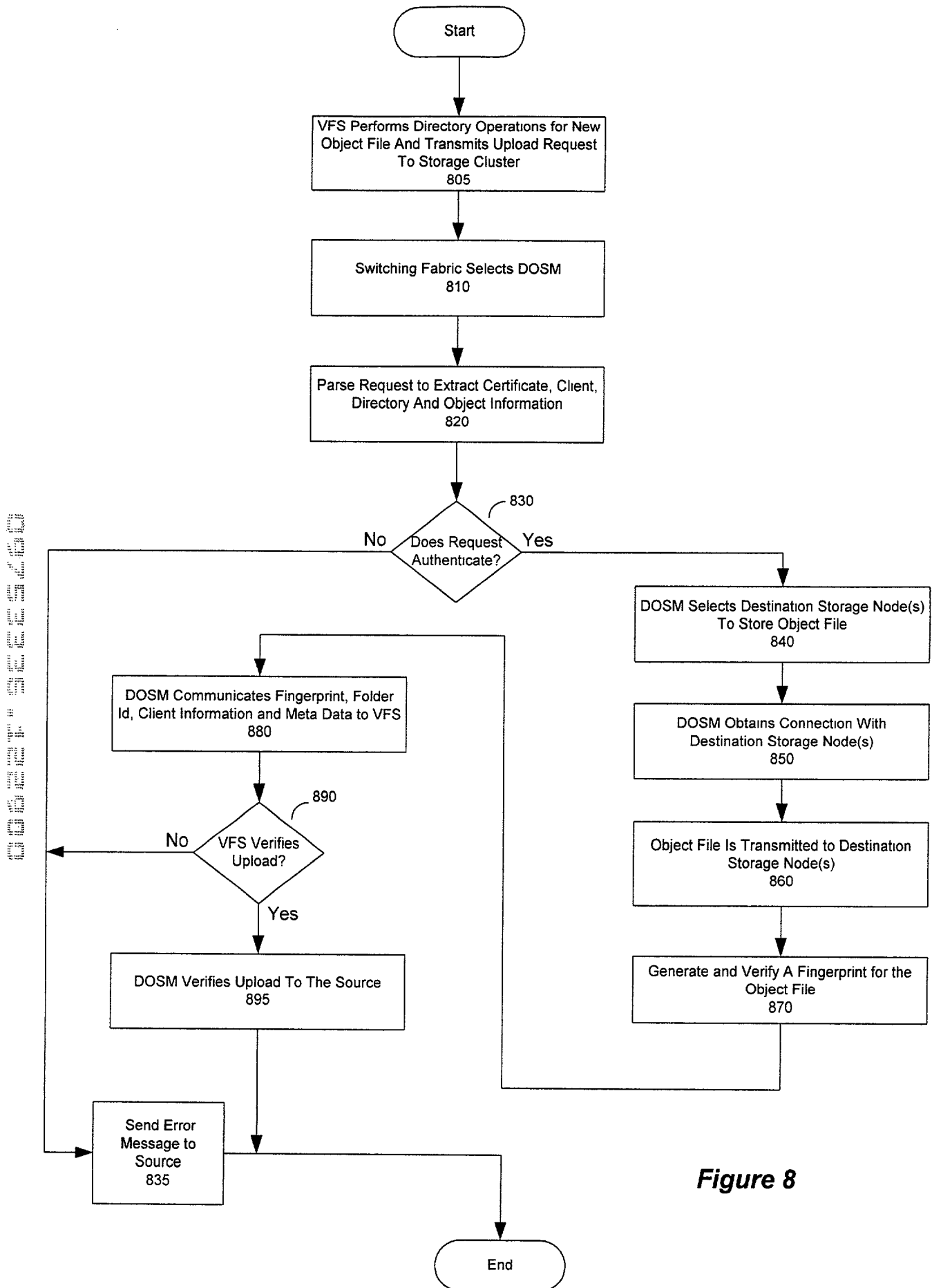


Figure 8

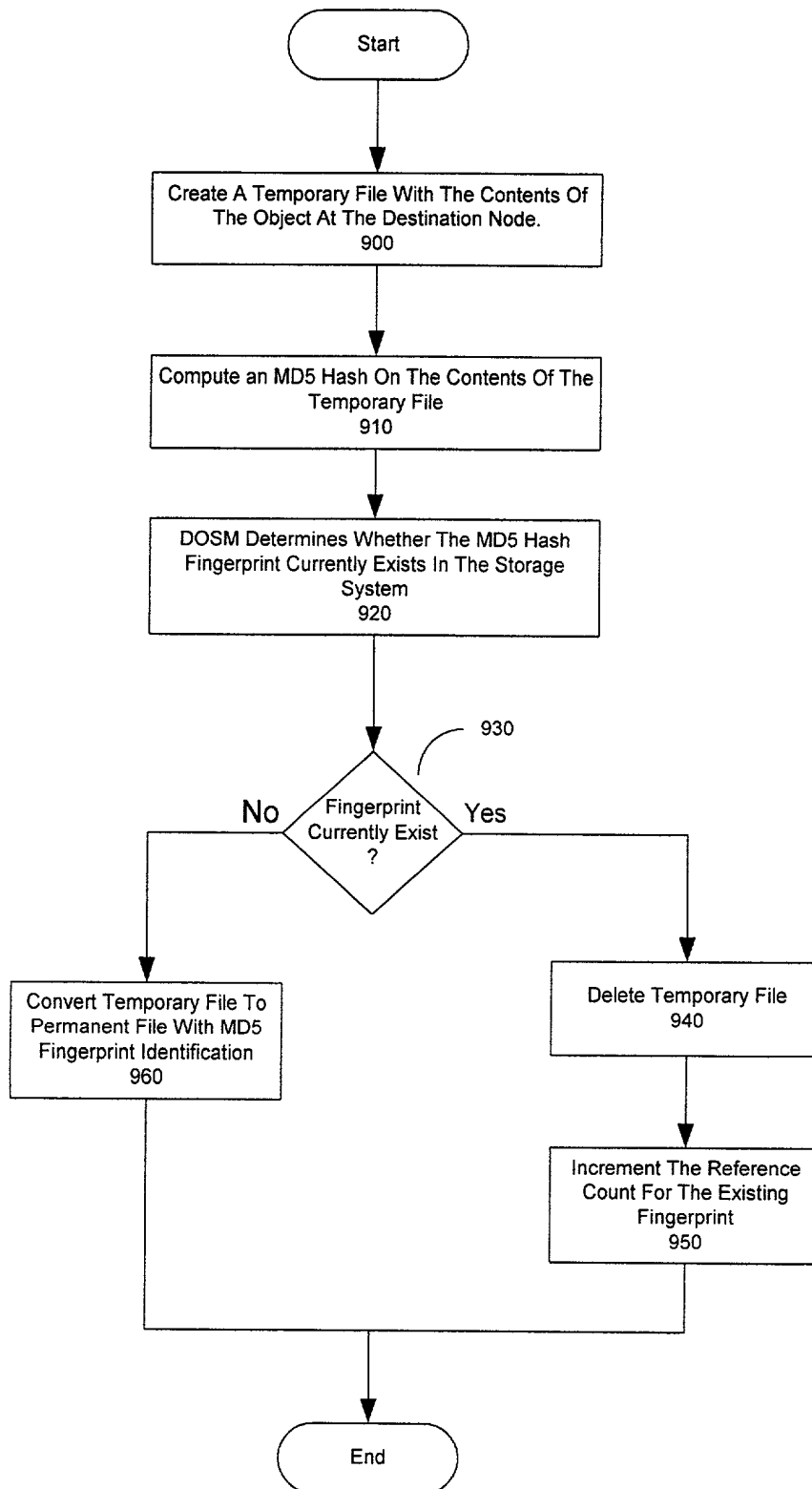


Figure 9

FIG. 10 is a block diagram of a system architecture for file upload/download operations. The system includes a Load Balancing Fabric 310, which is connected to four Data Object Storage Modules (DOSM) labeled DOSM 1, DOSM 2, DOSM 3, and DOSM "n". Each DOSM contains a Data Cache and a list of data objects. The Load Balancing Fabric 310 is also connected to File Upload/Download Operations, which are represented by a double-headed arrow.

File Upload/Download
Operations

Load Balancing Fabric
310

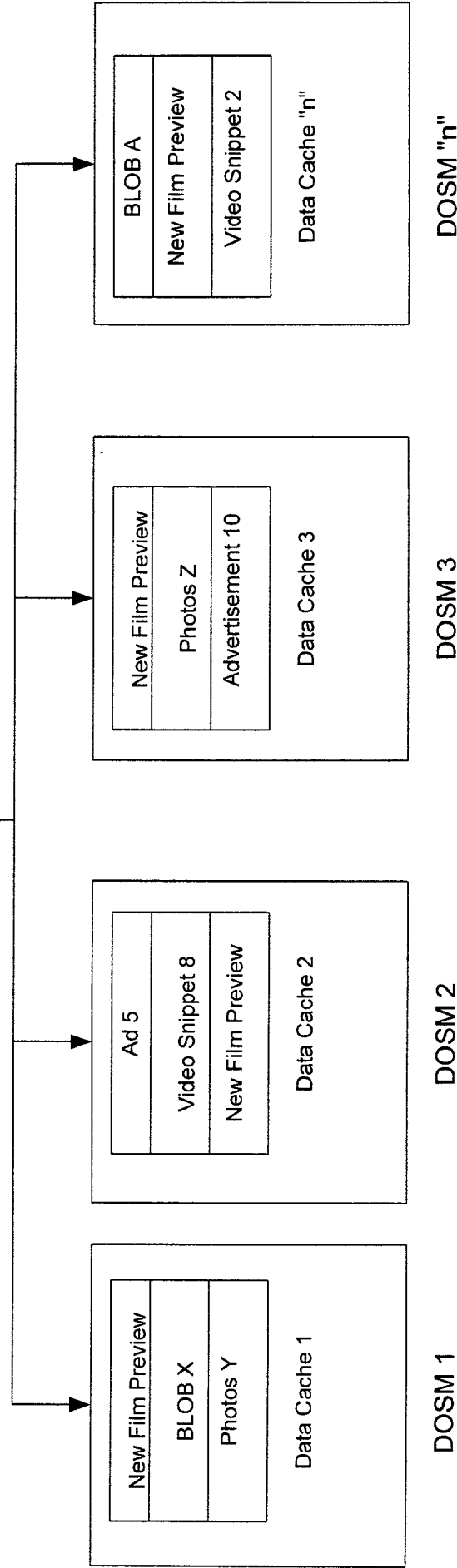


Figure 10

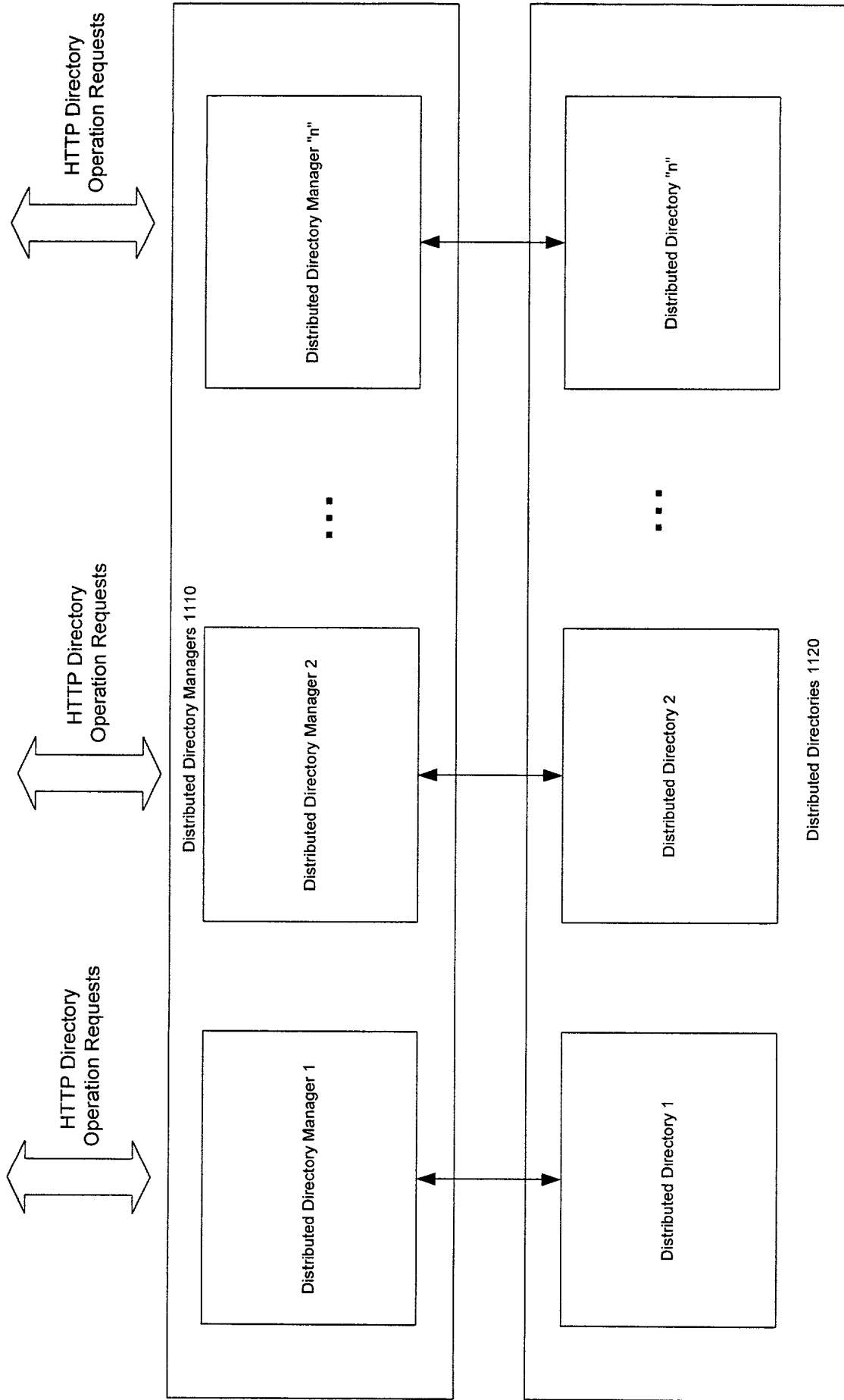


Figure 11

Customer Table

| | Customer Name | Customer Reserved Fields |
|--|---------------|----------------------------|
| | Customer A | [Customer stores data ...] |
| | Customer B | [Customer stores data ...] |
| | Customer C | [Customer stores data ...] |
| | Customer D | [Customer stores data ...] |

1200

Folder Table

| Customer Id | Folder Id | Folder Parent Id | Metadata |
|-------------|-----------|------------------|------------|
| 3 | 2 | - | [Reserved] |
| 3 | 100 | 2 | [Reserved] |
| 3 | 251 | 2 | [Reserved] |
| 3 | 166 | 251 | [Reserved] |

1210

File Table

| Customer Id | File Handle | Folder Id | Folder Parent Id | Metadata |
|-------------|-------------|-----------|------------------|------------|
| 3 | 52.MD5 | 100 | 2 | [Reserved] |
| 3 | 55.MD5 | 100 | 2 | [Reserved] |
| 3 | 99.MD5 | 166 | 251 | [Reserved] |
| 3 | 67.MD5 | 166 | 251 | [Reserved] |

1220

Figure 12

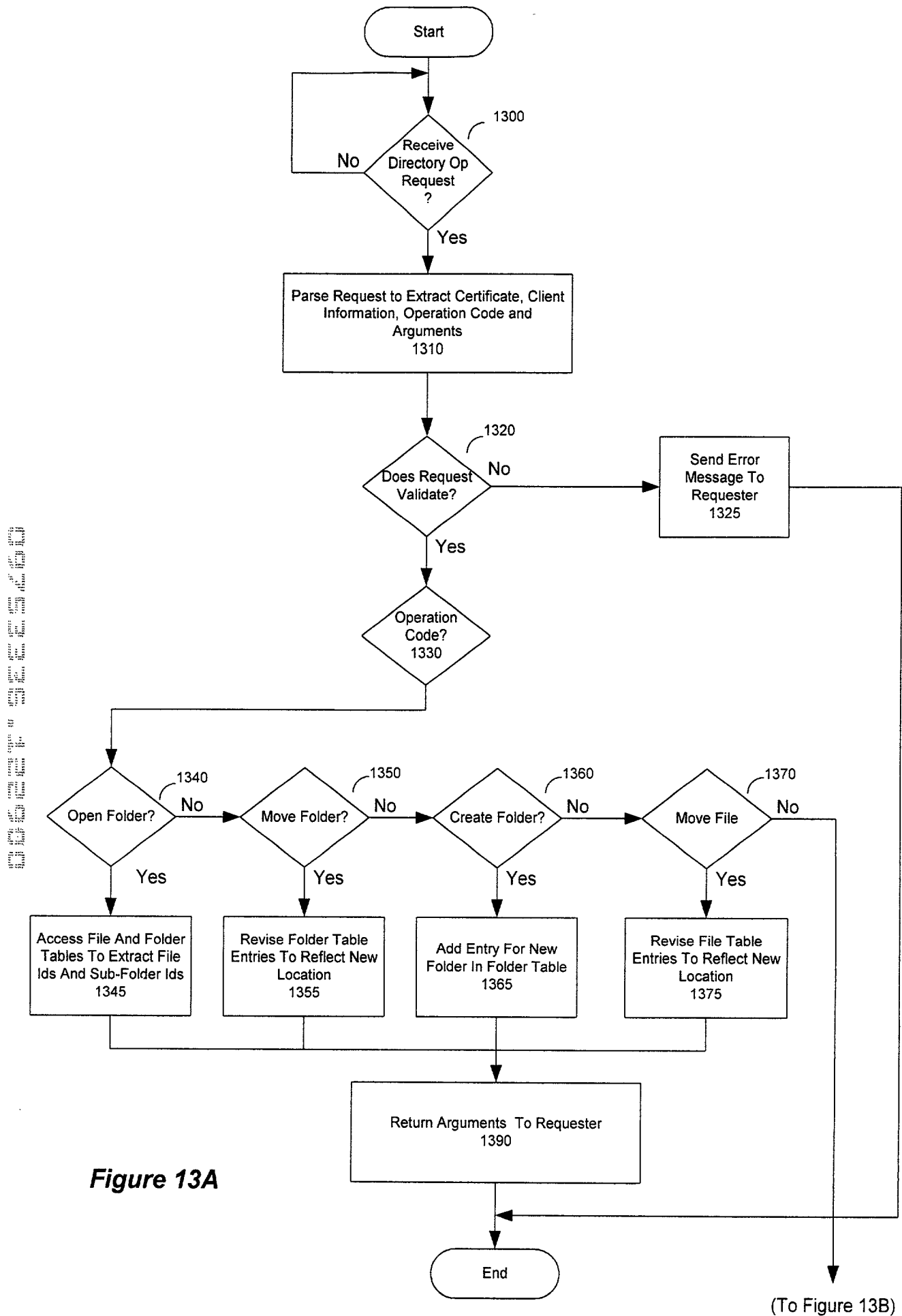


Figure 13A

(From Figure 13A)

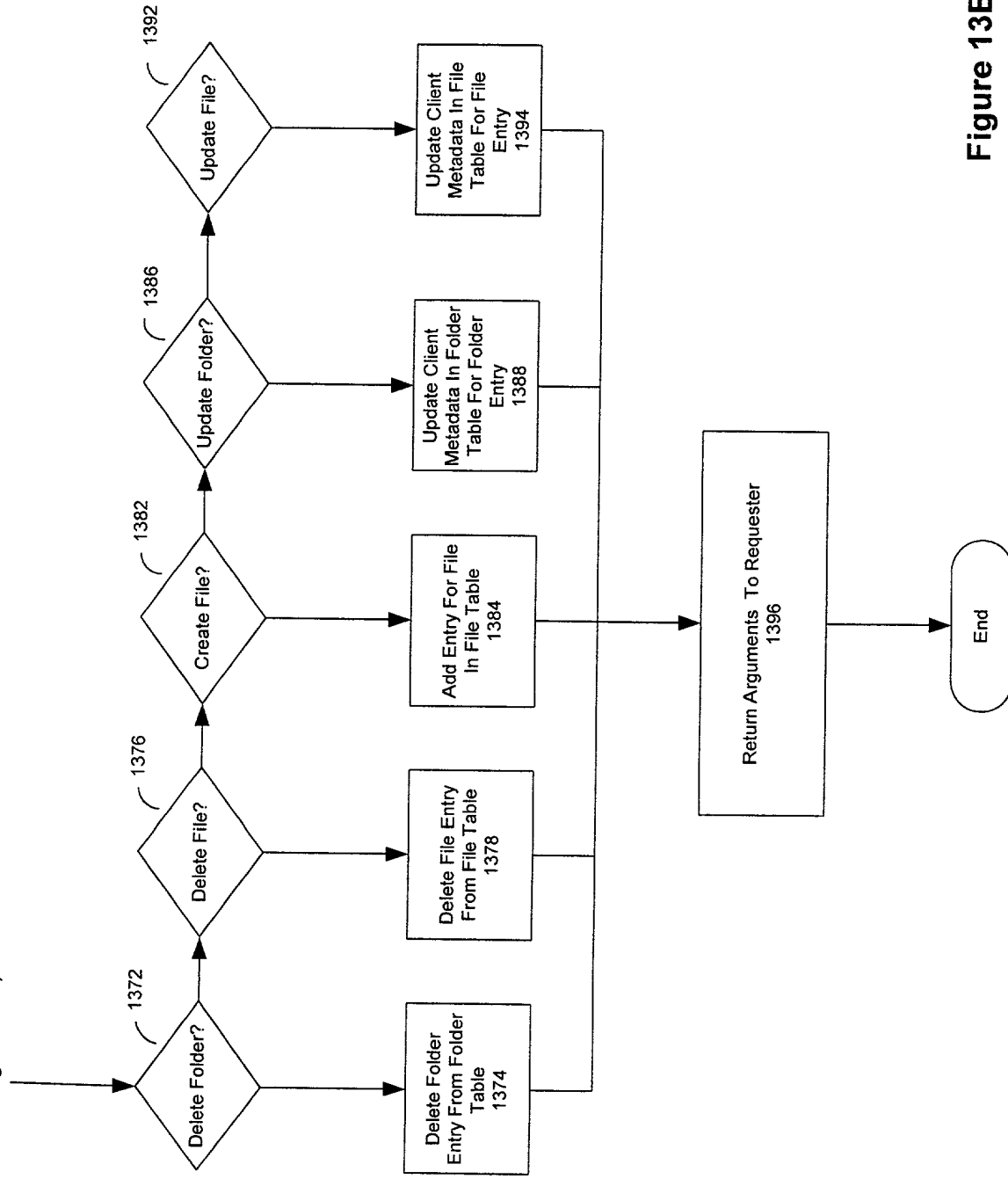


Figure 13B

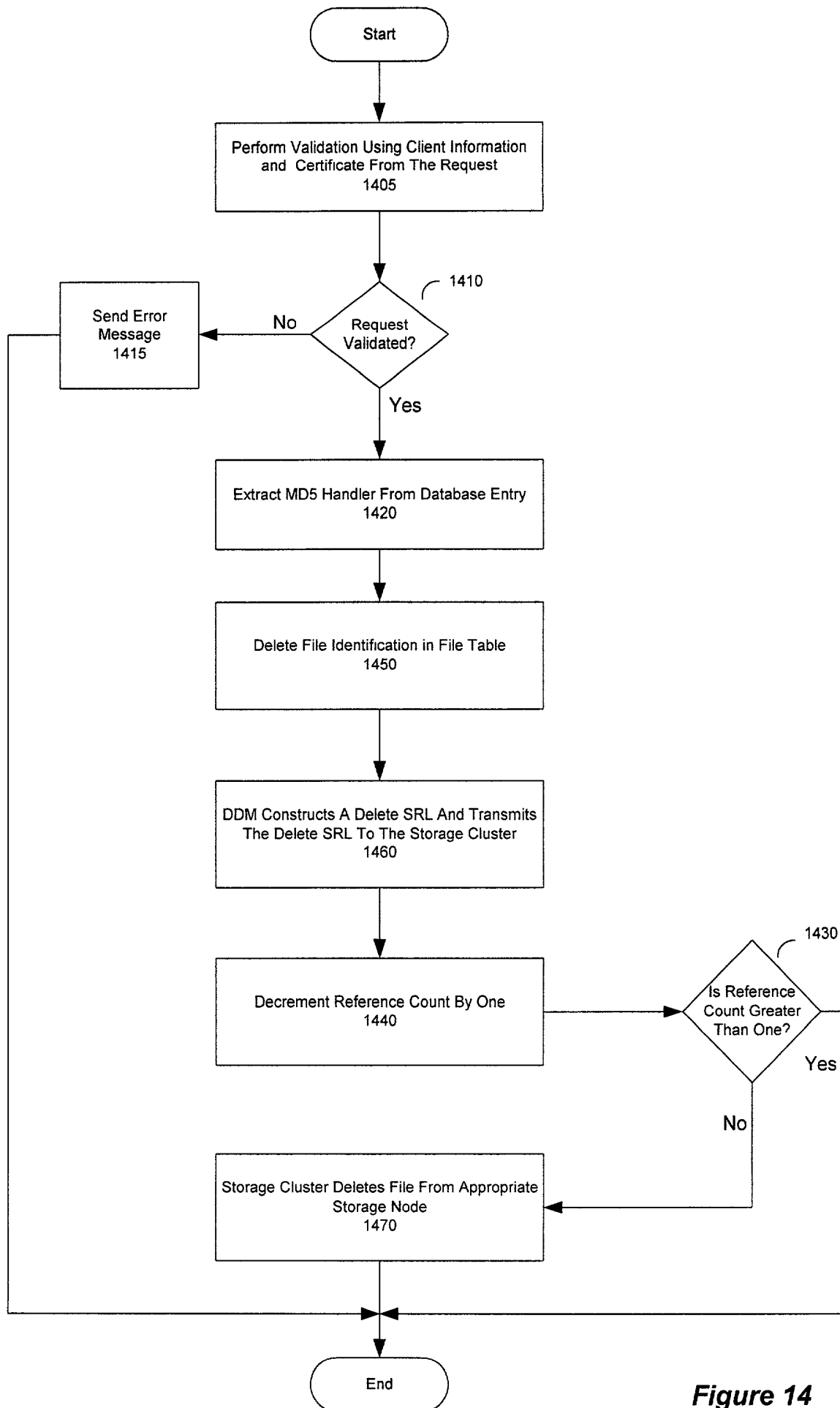


Figure 14

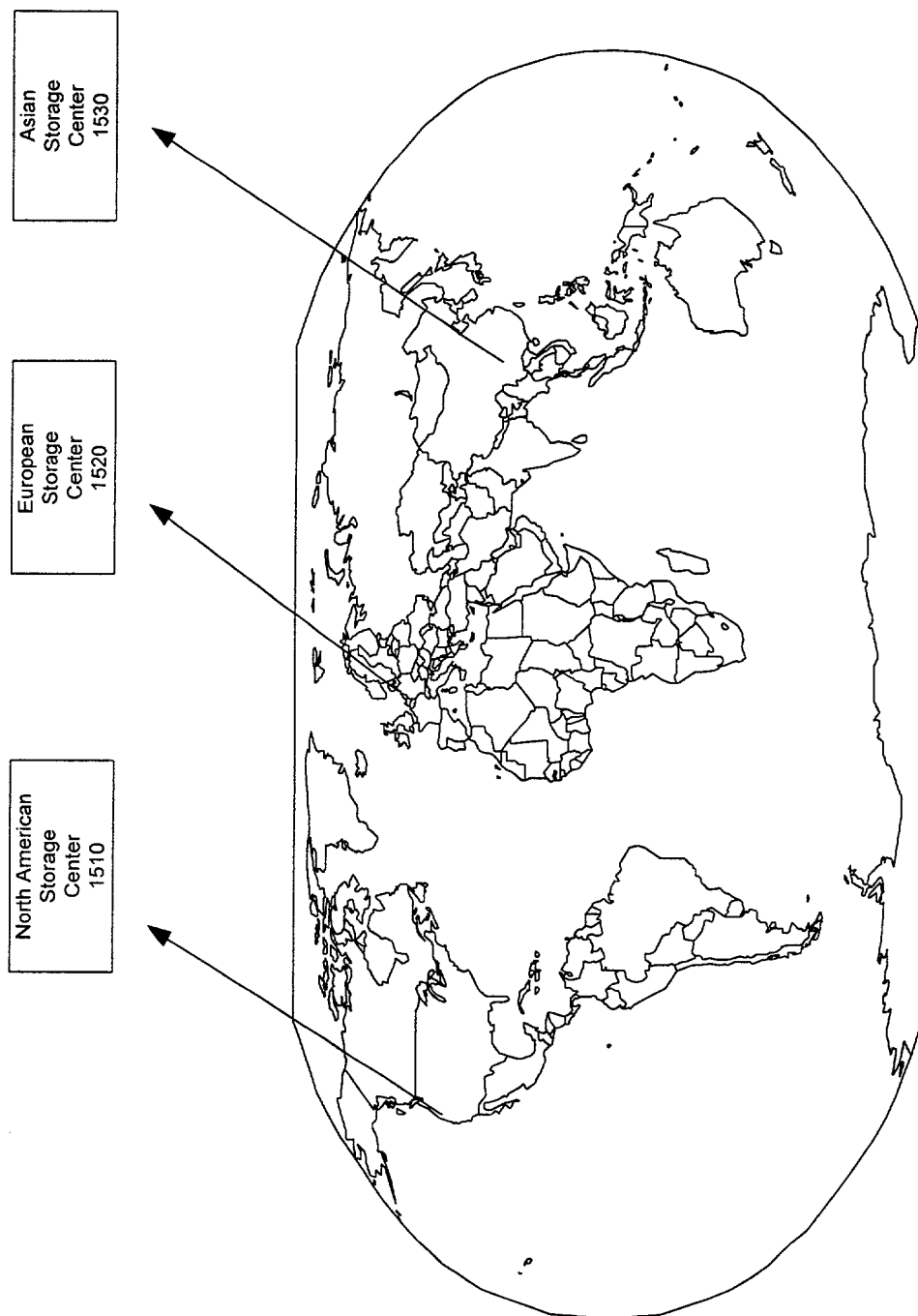


Figure 15

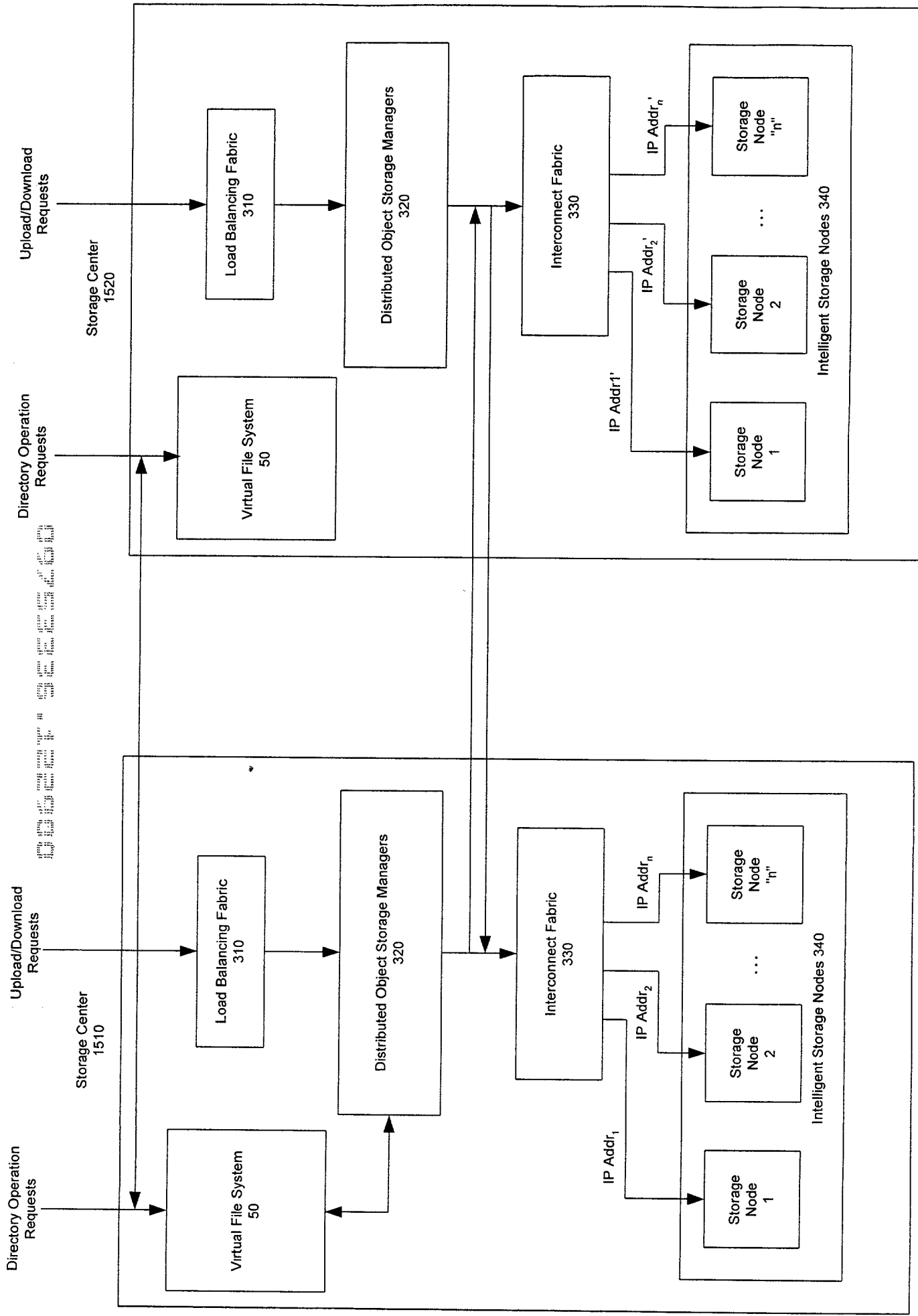


Figure 16

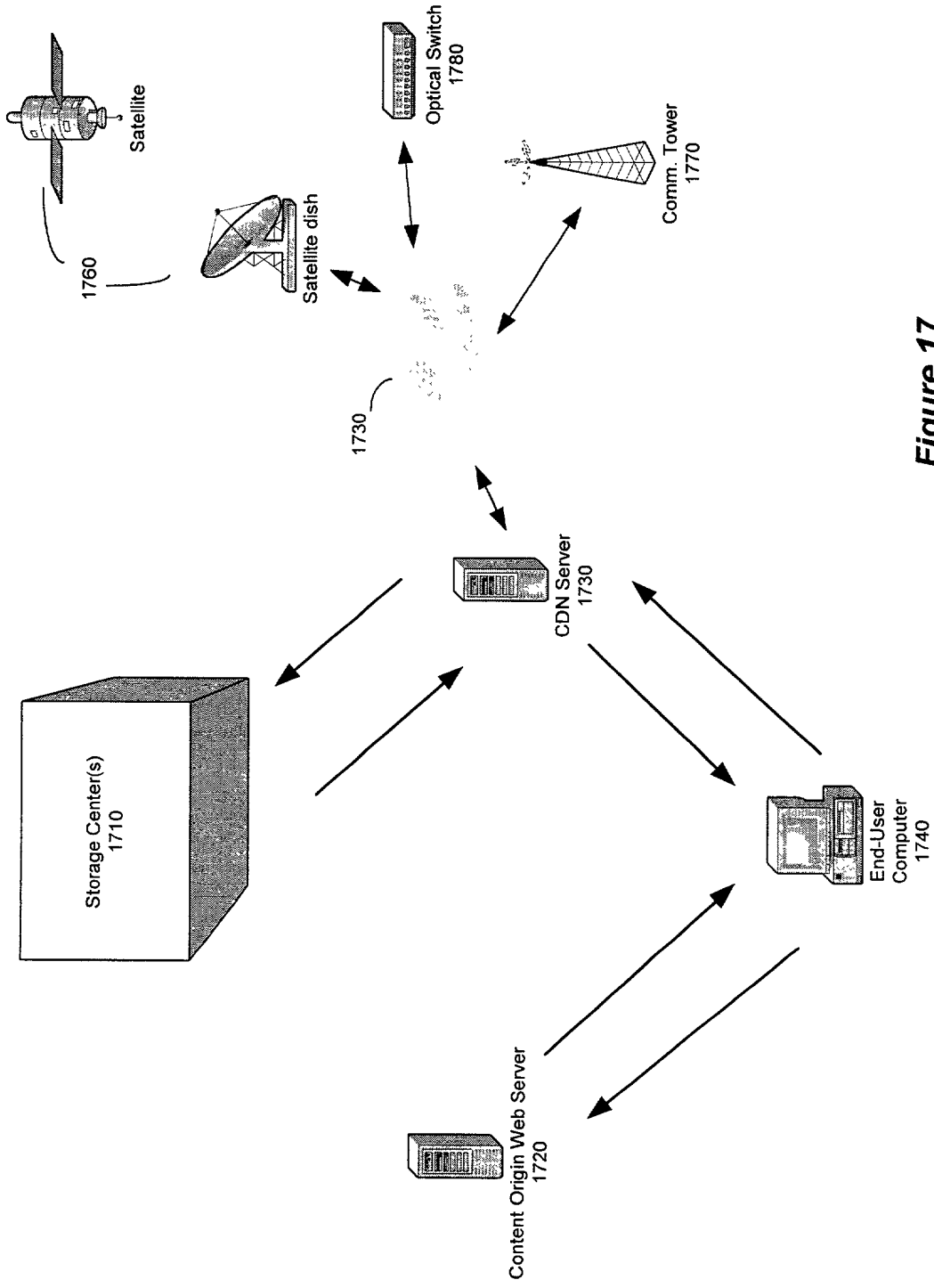


Figure 17

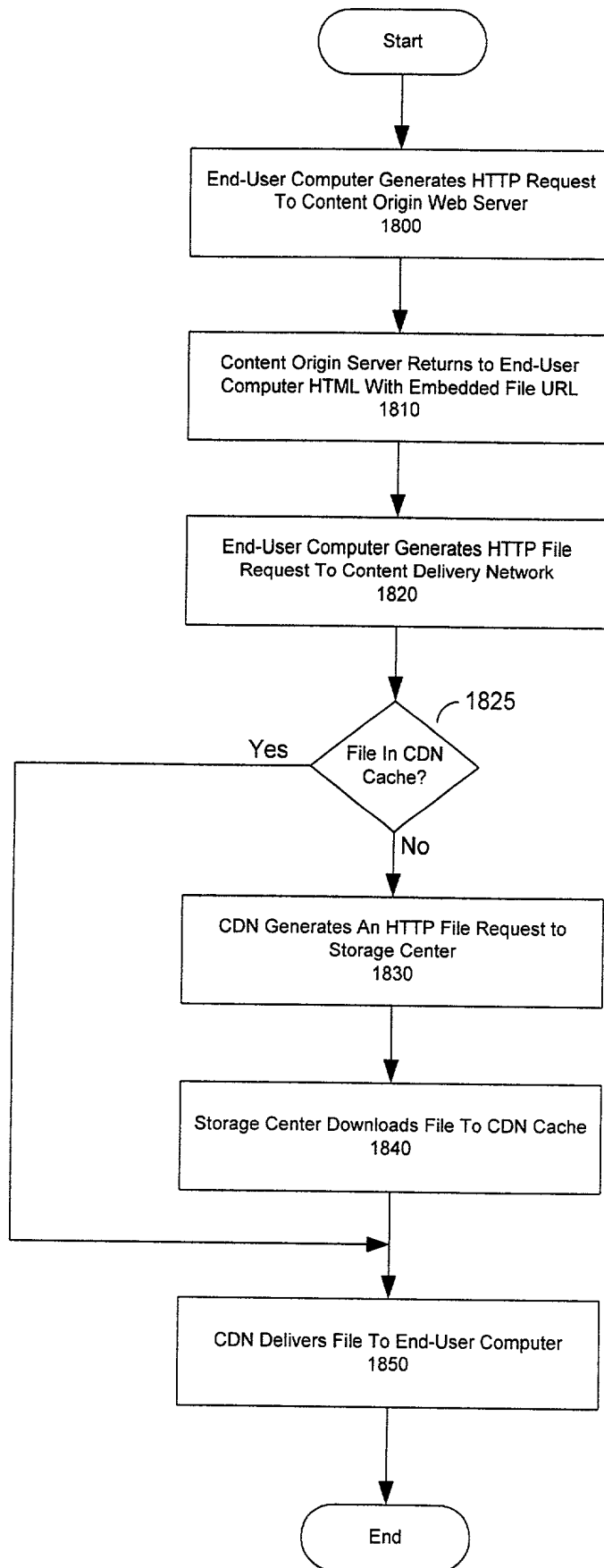


Figure 18

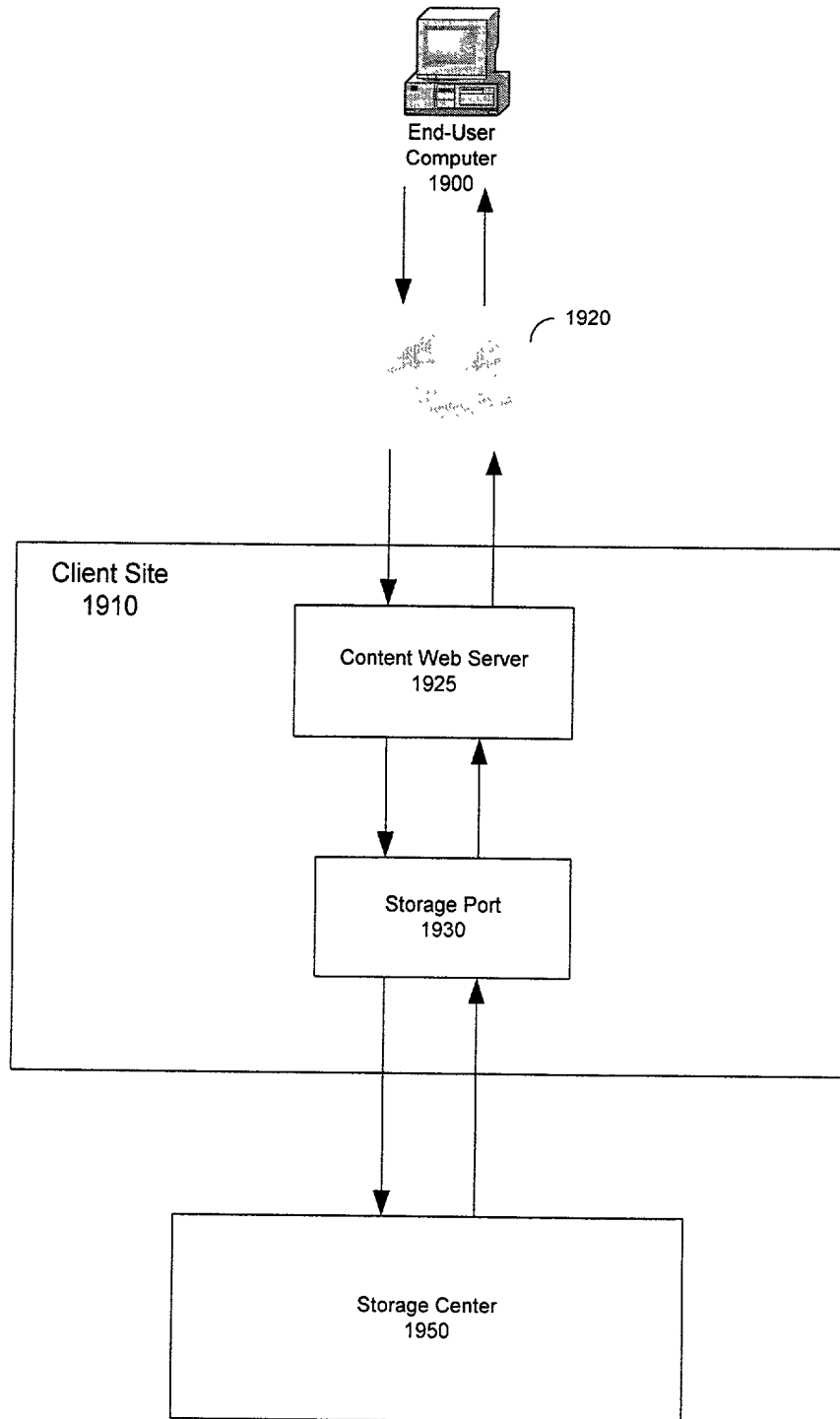


Figure 19

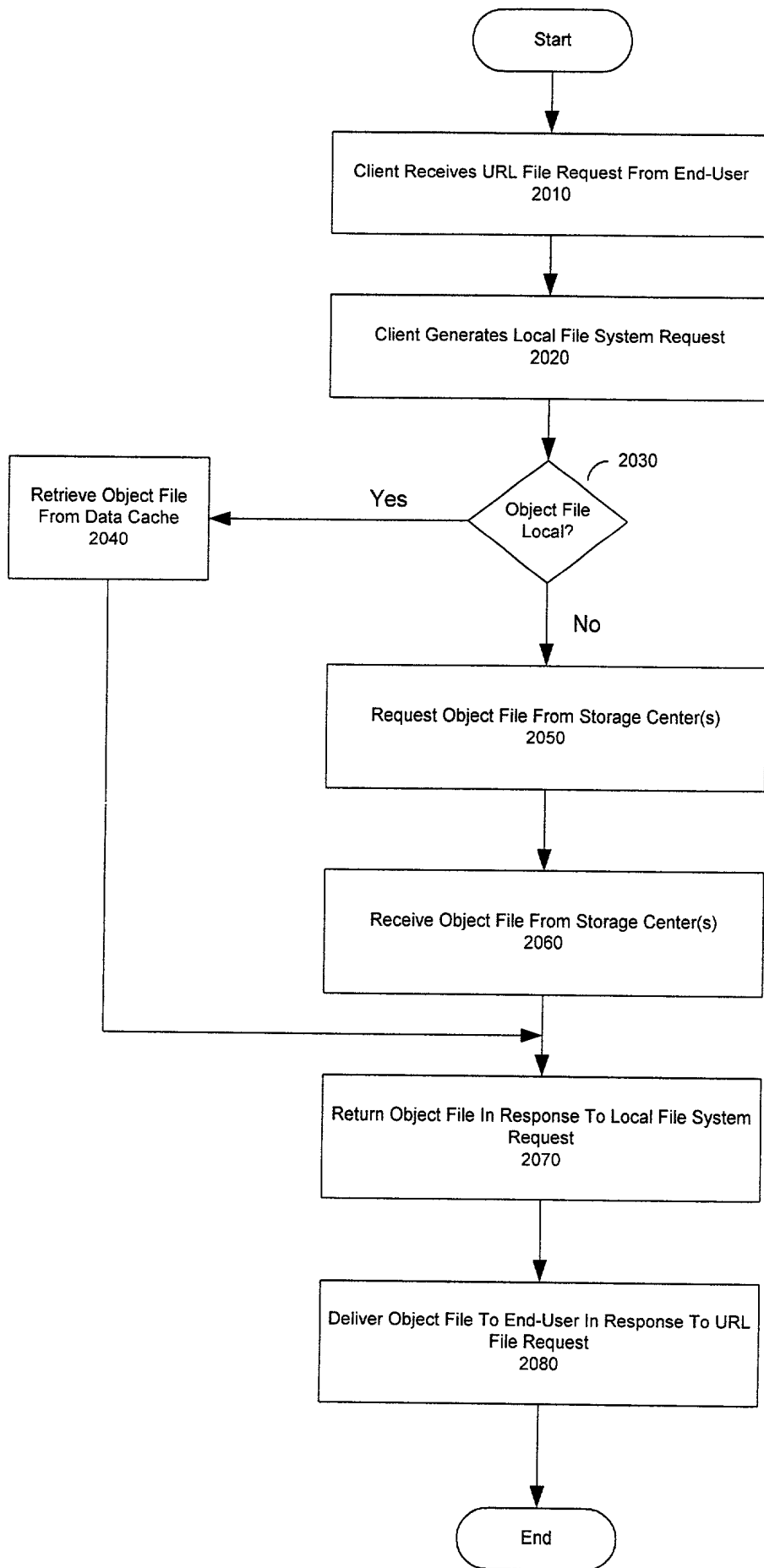


Figure 20

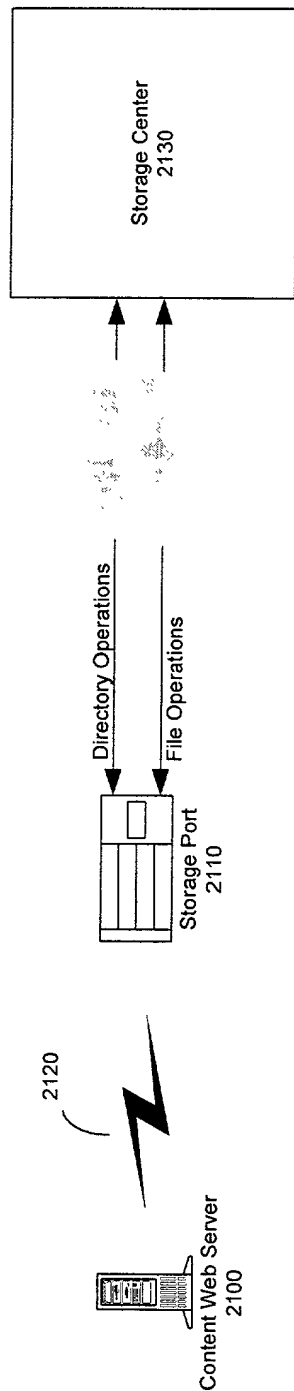


Figure 21a

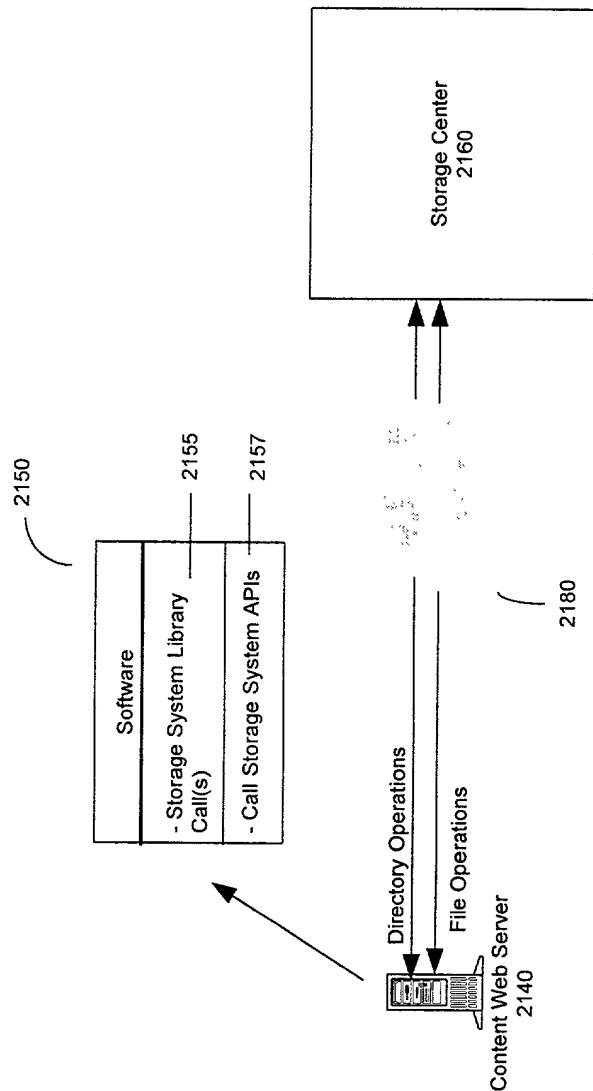


Figure 21b

FIG. 22 is a block diagram of a system architecture 2200, illustrating a storage port 2200. The system architecture 2200 includes a processing core 2210, memory 2230, and a storage port 2240. The processing core 2210 is connected to the memory 2230 and the storage port 2240. The storage port 2240 is connected to a network interface(s) 2220 and a storage port 2240. The network interface(s) 2220 includes network interface card 1, network interface card 2, and network interface card N. The storage port 2240 includes disk drive 1 and disk drive "n".

Storage Port
2200

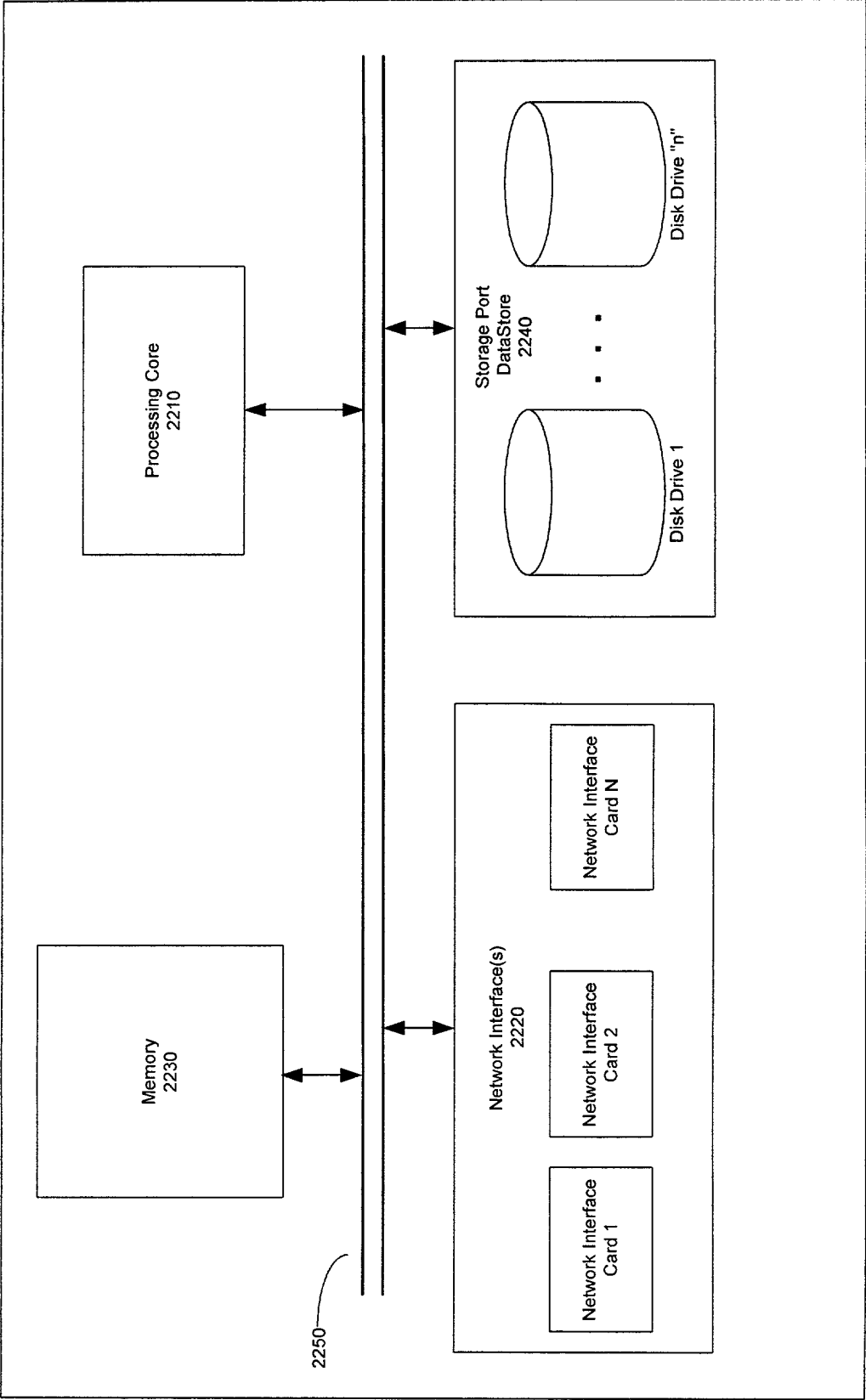


Figure 22

2300

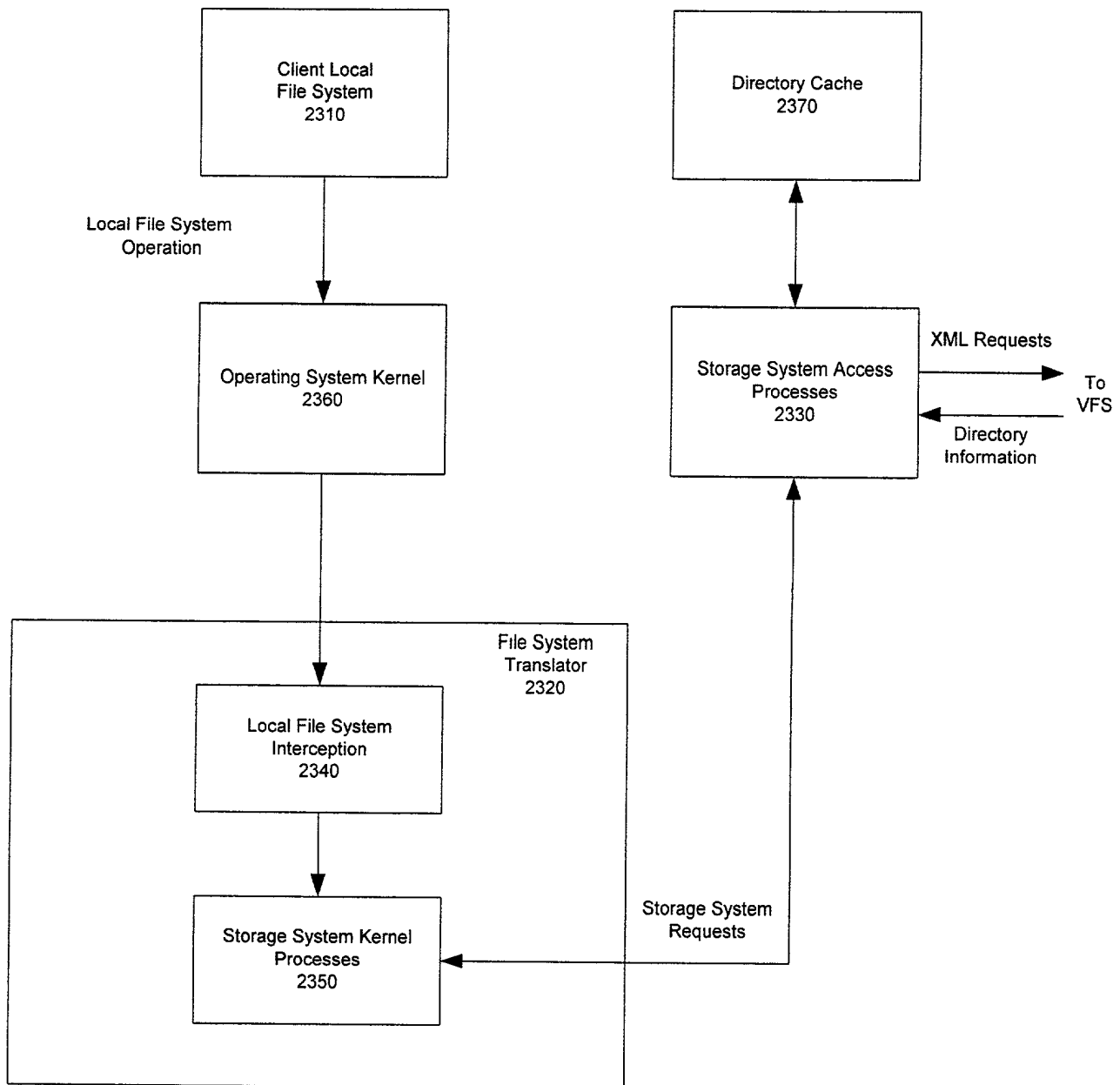


Figure 23

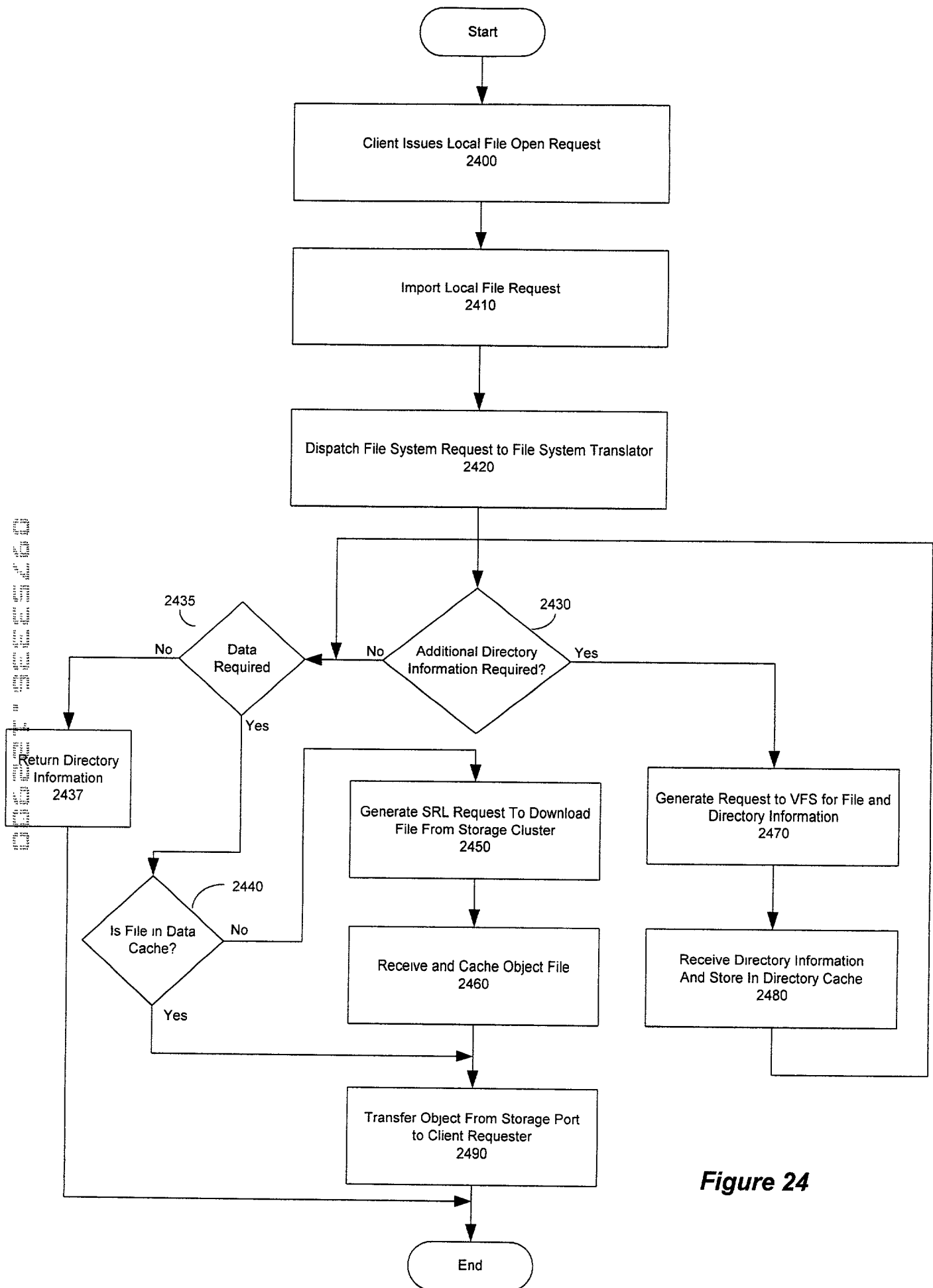


Figure 24

FIG. 25 is a block diagram of a system architecture for a client site and a storage center. The client site 2600 includes a content web server 2630 and a storage port 2640. The storage center 2650 is connected to the storage port 2640. An end-user computer 2610 is connected to the content web server 2630. The end-user computer 2610 sends a URL request to the content web server 2630. The content web server 2630 sends HTML with embedded SRL to the end-user computer 2610. The content web server 2630 also sends an SRL request to the storage port 2640. The storage port 2640 sends an object file served to the end-user computer 2610. A network 2660 is shown connecting the end-user computer 2610 and the storage center 2650.

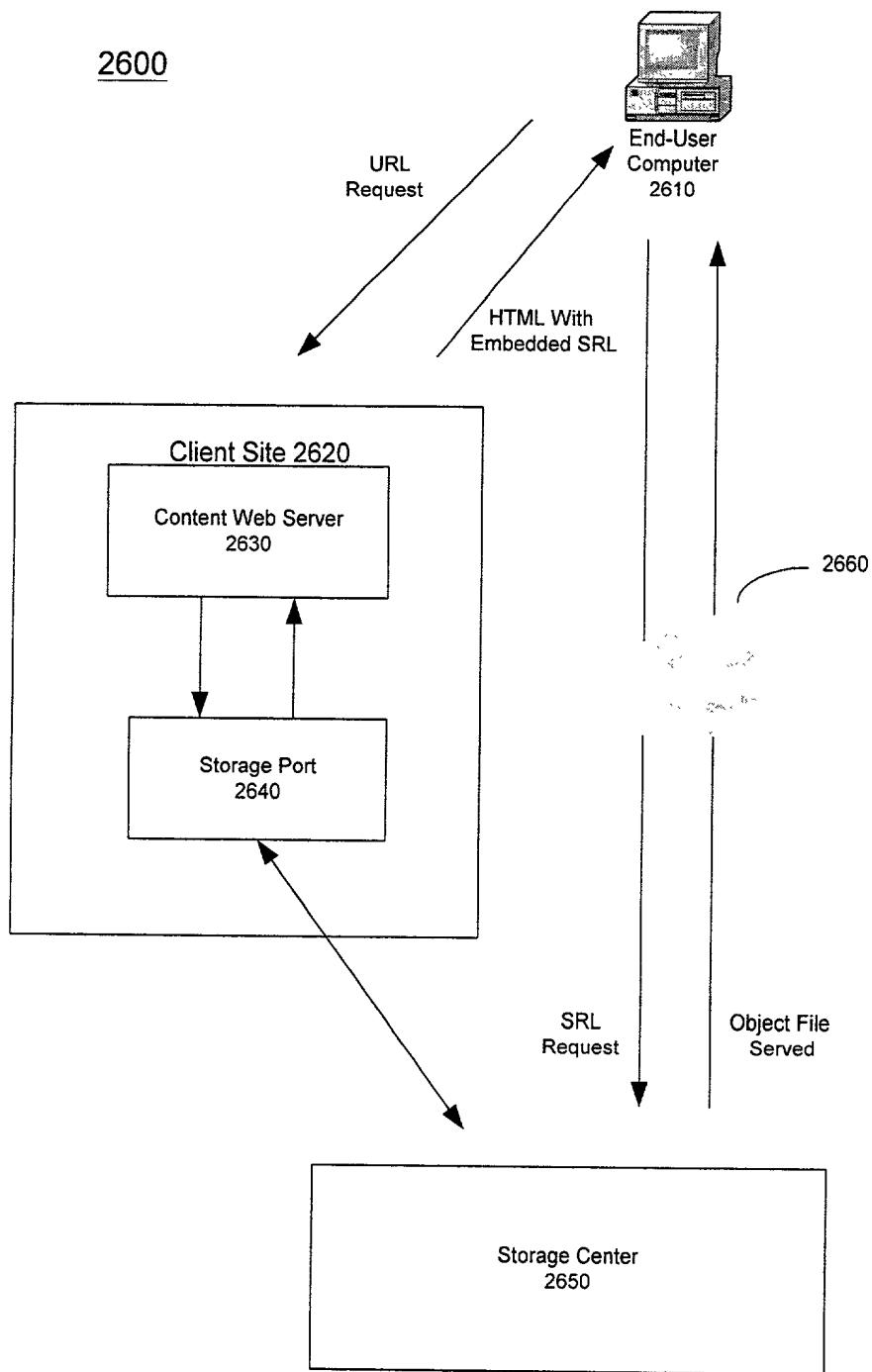


Figure 25

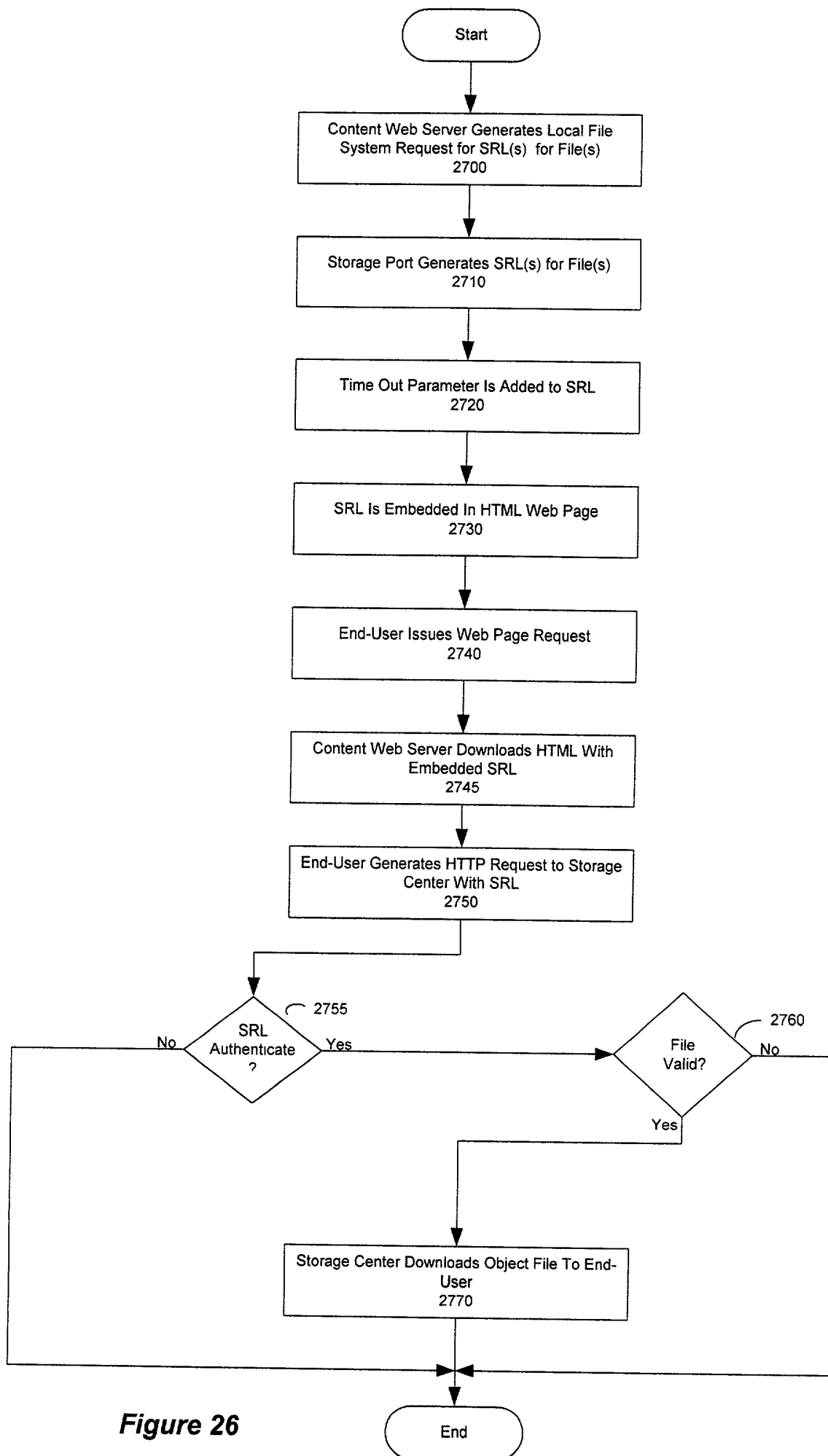


Figure 26

2800

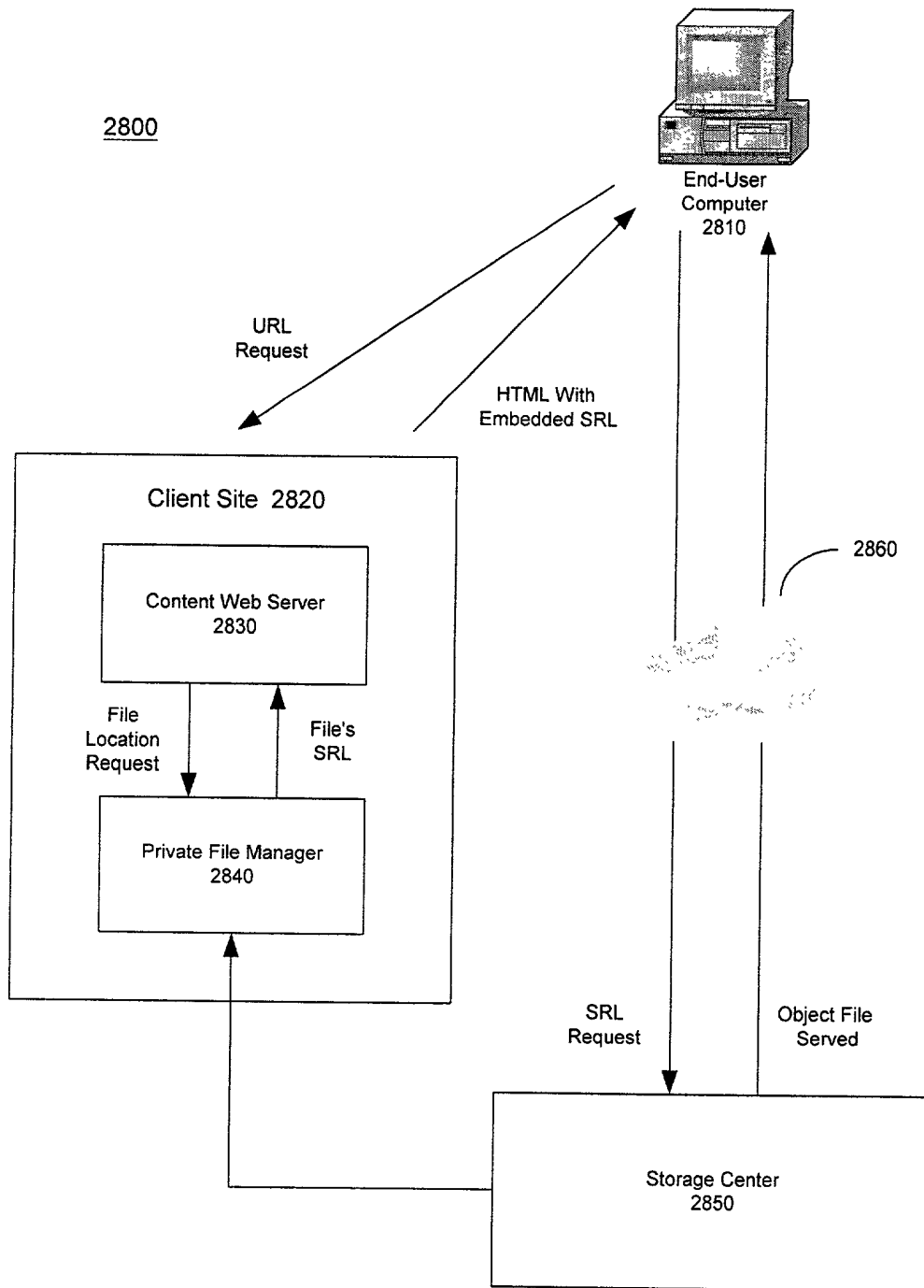


Figure 27

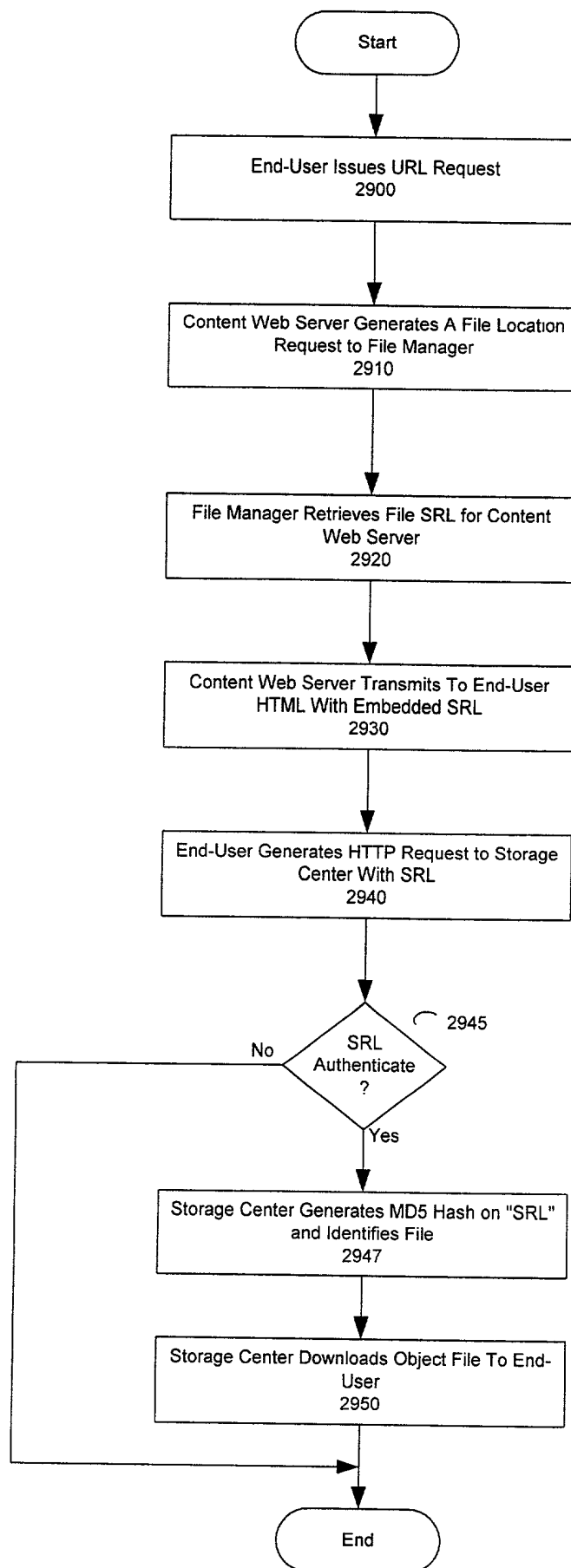


Figure 28

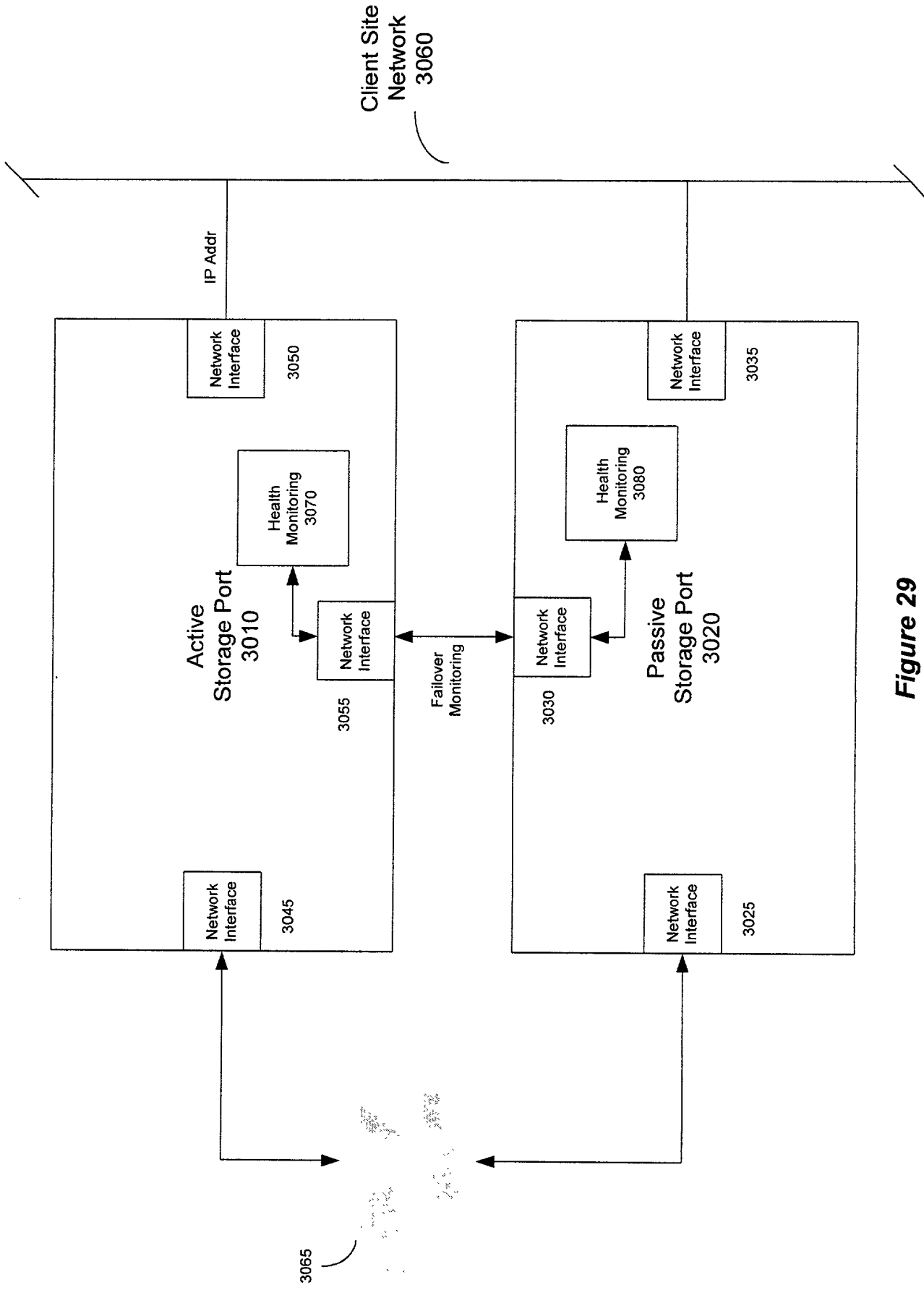


Figure 29

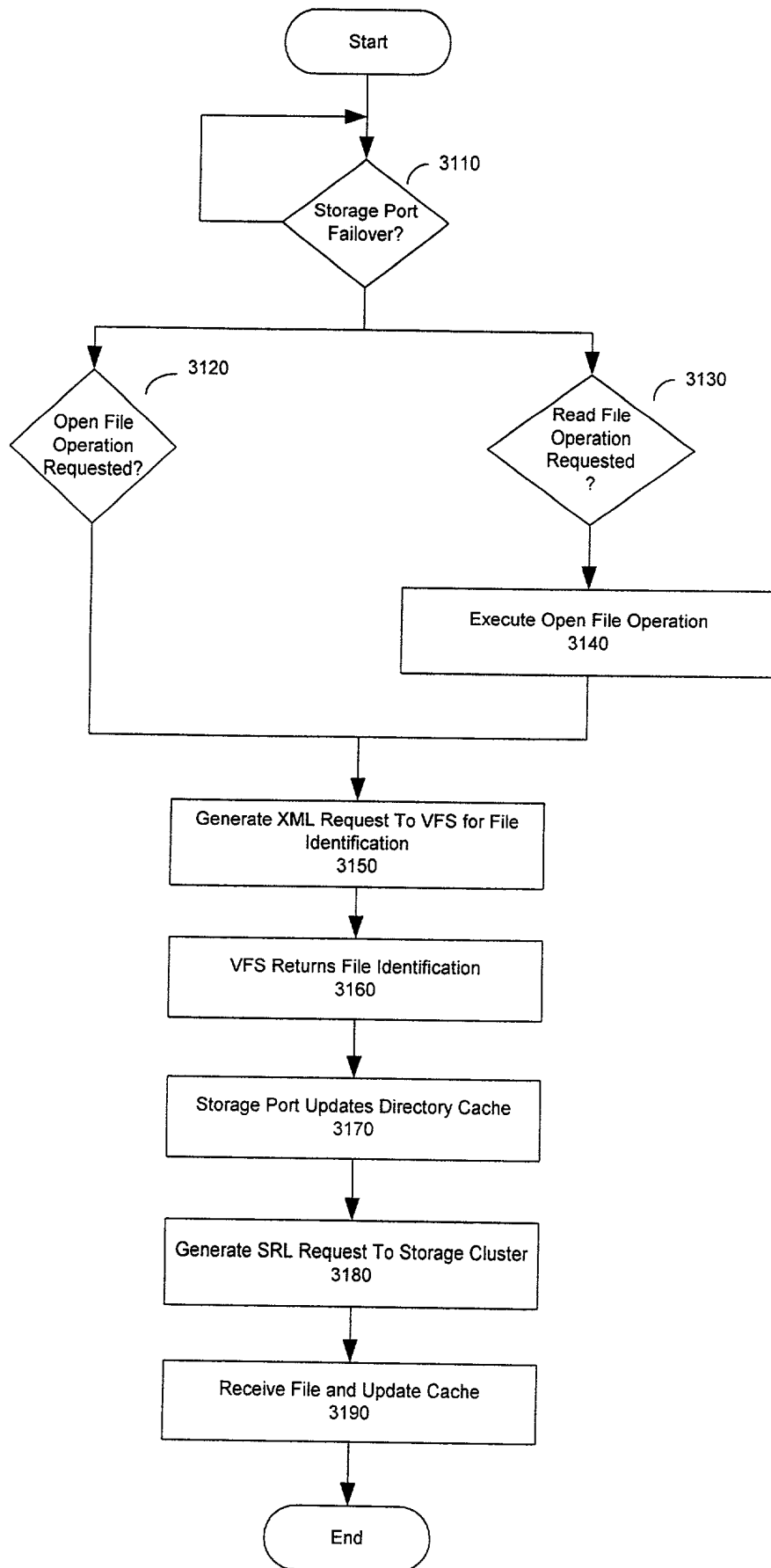


Figure 30

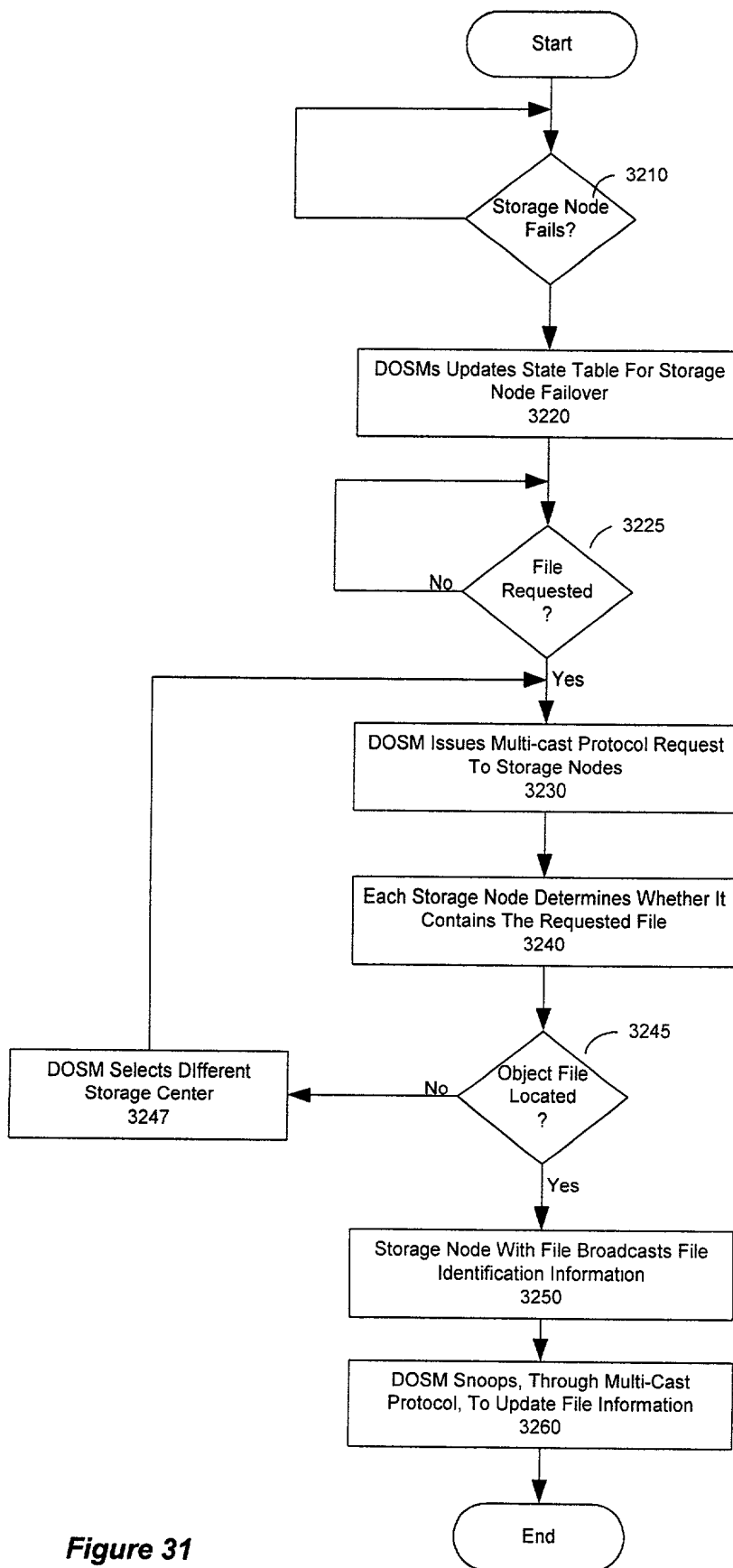


Figure 31